

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0028] with the following amended paragraph:

[0028] FIGs. 3 to 5 show a cleaning apparatus of a high-density plasma chemical vapor deposition chamber ~~30 a, 30b~~, (e.g., chambers 30a and 30b shown in FIG. 4 and FIG. 5, respectively) having formed therein a space housed within a dome shaped upper electrode 12. The upper electrode 12 is provided in an upper side of the chamber and applied with radio frequency energy. A lower electrode 14 is provided below the upper electrode 12 and applied with radio frequency energy. A chuck 16 is provided below the upper electrode 12 and formed thereon with the lower electrode 14 to fix a wafer thereon. A plurality of process gas nozzles 18 are provided at regular intervals on the sidewall of the chamber ~~30a, 30b~~ 30 so that a process gas is ejected into the space between the upper electrode 12 and lower electrode 14. Three or more cleaning gas nozzles ~~32a, 32b~~ 32 (e.g., nozzles 32a and 32b shown in FIG. 4 and FIG. 5, respectively) are provided at regular intervals on the sidewall of the chamber ~~30a, 30b~~ 30 below the process gas nozzle 18 so that a cleaning gas is ejected into the space between the upper electrode 12 and lower electrode 14.

Please replace paragraph [0029] with the following amended paragraph:

[0029] In addition, it is preferred that the cleaning gas nozzle ~~32a, 32b~~ 32 be bent toward the upper center of the chamber ~~30a, 30b~~ 30 relative to an upper surface of the chuck 16 and the lower electrode 14, so that the cleaning gas is ejected into the space between the electrodes 12, 14 with a predetermined pressure by a controller (not shown).

Please replace paragraph [0030] with the following amended paragraph:

[0030] As shown in FIG. 5, the cleaning gas nozzles ~~32a, 32b~~ may be bent in a spiral form toward the center portion of the chamber ~~30a, 30b~~ and in a direction from the lower portion to the upper portion relative to the upper surface of the chuck 16.

Please replace paragraph [0033] with the following amended paragraph:

[0033] At this time, byproducts created during such processes, i.e., various types of polymers, are continuously deposited on the internal surface of the chamber ~~30a, 30b~~ 30. As a result, the internal surface of the chamber ~~30a, 30b~~ 30 should be cleaned periodically, regardless of whether a wafer is positioned on the lower electrode 14.

Please replace paragraph [0034] with the following amended paragraph:

[0034] The cleaning process for removing polymers deposited on the internal sidewall of the chamber ~~30a, 30b~~ 30 is as follows. A predetermined cleaning gas is first supplied into the chamber ~~30a, 30b~~ 30 through the cleaning gas nozzles ~~32a, 32b~~ 32 in a state wherein a wafer is not introduced into the chamber ~~30a, 30b~~ 30. At this time, since the cleaning gas ~~nozzle 32a, 32b~~ nozzles 32 are arranged at regular intervals around the chuck 16, the cleaning gas is uniformly sprayed into the chamber ~~30a, 30b~~ 30 with a predetermined ejection pressure by a controller.

Please replace paragraph [0035] with the following amended paragraph:

[0035] The cleaning gas is ejected toward the center of the chamber ~~30a, 30b~~ 30 and may be first concentrated at the center of the chamber ~~30a, 30b~~ 30. However, the cleaning gas is uniformly and continuously diffused toward the sidewall of the chamber, thereby forming a uniformed distribution of the cleaning gas in the chamber.